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NEW FAUNISTIC AND TAXONOMIC DATA ON ORIBATID MITES (ACARI, ORIBATIDA) OF CUBA

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The present study is based on the oribatid mite material collected from the Pinar del Río Province, Cuba. A list of 22 species, belonging to 17 genera and 13 families, is presented. Nine species are reported from Cuba for the first time. Two new species are described from aquatic plants: *Tyrphonothrus pinarensis* Ermilov sp. n. (Malaconothridae) and *Scheloribates* (*Topobates*) *rioensis* Ermilov sp. n. (Scheloribatidae). The tritonymphal instar of *T. pinarensis* is described.

Keywords: *Tyrphonothrus*, *Scheloribates* (*Topobates*), morphology, taxonomy, Neotropical fauna, new record, tritonymph

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The fauna and taxonomy of Cuba's oribatid mites (Acari, Oribatida) have been extensively studied in recent years (e.g., Subías, Shtanchaeva, 2021; Ermilov, 2023; Ermilov et al., 2023). Our work is based on materials collected from two locations in Pinar del Río (Cuba's westernmost province). The primary goal of our paper is to present a list of all identified taxa, including new records. The secondary goal is to describe two new species from aquatic plants. One of these species (represented by adults and tritonymphs) belongs to the genus *Tyrphonothrus* Knülle 1957 (family Malaconothridae), while the other (represented by adults) – to the subgenus *Scheloribates* (*Topobates*) Grandjean 1958 (family Scheloribatidae).

Tyrphonothrus comprises about 90 species (see different taxonomic opinions in Colloff, Cameron, 2013; Subías, 2022; Subías, 2023 online version), which have a cosmopolitan distribution. The main generic traits for adults were summarized by Colloff and Cameron (2013). *Scheloribates* (*Topobates*) comprises about 30 species (Subías, 2022; Subías, 2023 online version; Ermilov, Yurtaev, 2023), which have a cosmopolitan distribution except the Nearctic and Antarctic areas. The main subgeneric traits for adults were summarized by Weigmann and Miko (1998).

Before our research, *Scheloribates* (*Topobates*) had never been registered in Cuba, and only one *Tyrphonothrus* species – *T. hauseri* (Mahunka 1984) – was recorded from Cuba (Ermilov et al., 2016).

MATERIALS AND METHODS

Specimens. Samples (unknown data and collector; collection of the Tyumen State University Museum of Zoology, Tyumen, Russia) were collected from two locations in Cuba: 1 – Pinar del Río Province, Las Terrazas, Baños de San Juan, aquatic plants; 2 – same but litter under palms.

Observation and documentation. For measurement and illustration, specimens were mounted in lactic acid on temporary cavity slides. All measurements are in micrometers (μm). Body length was measured in lateral view, from the tip of the rostrum to the posterior edge of the notogaster; other structures were oriented to avoid parallax errors. Notogastral width refers to the maximum width in dorsal aspect. Setal lengths were measured perpendicular to their long axes, accounting for curvature. Formulas for leg solenidia are given in square brackets according to the sequence genu-tibia-tarsus. Drawings were made with a camera lucida using a Leica DM 2500 light microscope.

Terminology. Morphological terminology used in this paper mostly follows that of papers on *Tyrphonothrus* and *Scheloribates* (*Topobates*) (e.g., Grandjean, 1958; Ermilov, Rybalov, 2023; Ermilov, Yurtaev, 2023); also, see Norton (1977) for leg setal nomenclature and Norton and Behan-Pelletier (2009) for overview.

Abbreviations and notations. Prodorsum: *lam* = lamella; *car* = carina; *plam* = prolamella; *tlam* = translamella; *slam* = sublamella;

kf = keel-shaped ridge; *ro*, *le*, *in*, *bs*, *ex/ex*$_1$ = rostral, lamellar, interlamellar, bothridial, and exobothridial setae, respectively; *ex*$_2$ = vestige of second exobothridial seta; *D* = dorsophragma; *P* = pleurophragma. Notogaster: *mnr* = medial notogastral ridge; *sb* = striate band; *c*, *cp*, *d*, *e*, *f*, *da*, *dm*, *dp*, *la*, *lm*, *lp*, *h*, *p* = setae; *Sa*, *S1*, *S2*, *S3* = sacculi; *ia*, *im*, *ip*, *ih*, *ips* = lyrifissures/cupules; *gla* = opisthonotal gland opening. Gnathosoma: *a*, *m*, *h* = anterior, middle seta of gena and hypostomal seta of mentum, respectively; *d*, *l*, *cm*, *acm*, *ul*, *su*, *lt*, *vt*, *inf*, *sup* = palp setae; ω = palp solenidion; *ep* = postpalpal seta; *cha*, *chb* = cheliceral setae; *Tg* = Trägårdh's organ. Epimeral and lateral podosomal regions: *1a*, *1b*, *1c*, *2a*, *3a*, *3b*, *3c*, *4a*, *4b*, *4c* = epimeral setae; *z* = aperture of supracoxal gland; *Ah* = humeral porose area; *PdI*, *PdII* = pedotecta I and II, respectively; *dis* = discidium; *cir* = circumpedal carina. Anogenital region: *g*, *ag*, *an*, *ad* = genital, aggenital, anal, and adanal setae, respectively; *ian*, *iad* = anal and adanal lyrifissures/cupules, respectively; *po* = preanal organ. Legs: *Tr*, *Fe*, *Ge*, *Ti*, *Ta* = trochanter, femur, genu, tibia, and tarsus, respectively; *pa* = porose area; ω, σ, φ = solenidia; ε = famulus; *d*, *l*, *v*, *ev*, *bv*, *ft*, *tc*, *it*, *p*, *u*, *a*, *s*, *pv*, *pl* = setae. Instars: TN = tritonymph; AD = adult.

LIST OF IDENTIFIED TAXA

Trhypochthoniidae

Archegozetes magnus (Sellnick 1925): 1 (3 ex.), 2 (1 ex.). Distribution: Tropical.

Malaconothridae

Tyrphonothrus pinarensis Ermilov sp. n.: 1 (25 ex.).

Oppiidae

Aeroppia maldivesensis Ermilov et Joharchi 2022: 1 (9 ex.), 2 (2 ex.). Distribution: Maldives, Cuba.

Multioppia (*Hammeroppia*) *insularis* Mahunka 1985: 2 (3 ex.). Distribution: Neotropical. New record of the species in Cuba.

Pseudoamerioppia barrancensis (Hammer 1961): 1 (3 ex.). Distribution: Neotropical, Oriental, Western Africa, Canary Islands

Tectocepheidae

Tectocepheus sarekensis Trägårdh 1910: 1 (1 ex.). Distribution: Cosmopolitan. New record of the species in Cuba.

Carabodidae

Gymnobodes sp.: 2 (1 ex.).

Hydrozetidae

Hydrozetes lemnae (Coggi 1897): 1 (5 ex.). Distribution: Semicosmopolitan. New record of the species in Cuba.

Ceratozetidae

Heterozetes heleios Behan-Pelletier 1998: 1 (1 ex.). Distribution: Costa Rica. New record of the species in Cuba.

Punctoribatidae

Lamellobates botari Balogh et Mahunka 1977: 1 (13 ex.). Distribution: Neotropical.

Lamellobates molecula (Berlese 1916): 1 (47 ex.), 2 (16 ex.). Distribution: Tropical, Subtropical.

Mochlozetidae

Mochlozetes penetrabilis Grandjean 1930: 1 (3 ex.). Distribution: Tropical, Japan.

Scheloribatidae

Muliercula orixaensis (Badejo, Woas et Beck 2002): 1 (1 ex.). Distribution: Neotropical. New record of the species in Cuba.

Scheloribates fimbriatus Thor 1930: 1 (16 ex.). Distribution: Tropical, Subtropical.

Scheloribates praeincisus praeincisus (Berlese 1910): 1 (1 ex.), 2 (2 ex.). Distribution: Tropical.

Scheloribates (*Hemileius*) *major* (Mahunka 1985): 2 (1 ex.). Distribution: Neotropical. New record of the species in Cuba.

Scheloribates (*Hemileius*) *suramericanus* (Hammer 1958): 1 (1 ex.). Distribution: Neotropical, U.S.A. (Kentucky).

Scheloribates (*Topobates*) *rioensis* Ermilov sp. n.: 1 (2 ex.).

Haplozetidae

Protoribates paracapucinus (Mahunka 1988): 1 (12 ex.). Distribution: Tropical, Subtropical.

Oribatulidae

Phauloppia gracilis Sellnick 1952: 2 (3 ex.). Distribution: Bermuda. New record of the species in Cuba.

Galumnidae

Galumna australis (Berlese 1914): 1 (1 ex.). Distribution: Neotropical. New record of the species in Cuba.

Pergalumna silvatica Hammer 1961: 2 (1 ex.). Distribution: Neotropical. New record of the species in Cuba.

The list includes 22 species belonging to 17 genera and 13 families. Of these, two species are new to science and one species is unidentified. Nine species (*Multioppia* (*Hammeroppia*) *insularis*, *Tectocepheus sarekensis*, *Hydrozetes lemnae*, *Heterozetes heleios*, *Muliercula orixaensis*, *Scheloribates* (*Hemileius*) *major*, *Phauloppia gracilis*, *Galumna australis*, *Pergalumna silvatica*) are recorded for the first time from Cuba. Of the 19 identified known species, eight are known only from the Neotropical region, nine have a broader distribution (more than one geographical region), and two are cosmopolitan/semicosmopolitan. Four species (*Archegozetes magnus*, *Aeroppia maldivesensis*, *Lamellobates molecula*, *Scheloribates praeincisus praeincisus*) were found in both of the

examined locations, while the rest of the species were collected from only one of the two locations (in particular, 13 species from aquatic plants and five species from litter under palms).

TAXONOMY

Tyrphonothrus pinarensis Ermilov sp. n.

(Figs 1–3)

Type material. Holotype (♀), 24 paratypes (♀♀) and three tritonymphs: Cuba, Pinar del Río Province, Las Terrazas, Baños de San Juan, aquatic plants (unknown data and collector; collection of the Tyumen State University Museum of Zoology, Tyumen, Russia).

The holotype is deposited in the collection of the Senckenberg Museum of Natural History, Görlitz, Germany; 24 paratypes and three tritonymphs are deposited in the collection of the Tyumen State University Museum of Zoology, Tyumen, Russia. All specimens are preserved in 70% solution of ethanol with a drop of glycerol.

Diagnosis of adult. Body length: 555–585. Notogaster with small sparse foveolae. Lateral carina directed to insertion of lamellar seta. Rostral and lamellar setae medium-sized, setiform, barbed; interlamellar seta long, setiform, barbed; *in* >>*le* >>*ro*; exobothridial seta ex_1 short, setiform, barbed. Medioposterior part of notogaster slightly widening. Notogaster with two longitudinal medial ridges. Notogastral setae e_2, h_1, p_2, h_2 long (h_2 longest), subflagellate, barbed; others short, setiform, barbed; p_3 located anteriorly to p_2. Epimeral setal formula: 3–1–2–3; all setae short, setiform, roughened. Six pairs of genital setae, all short, setiform, smooth or roughened, directed backwards; anal and adanal setae short, setiform, roughened. Tridactylous;

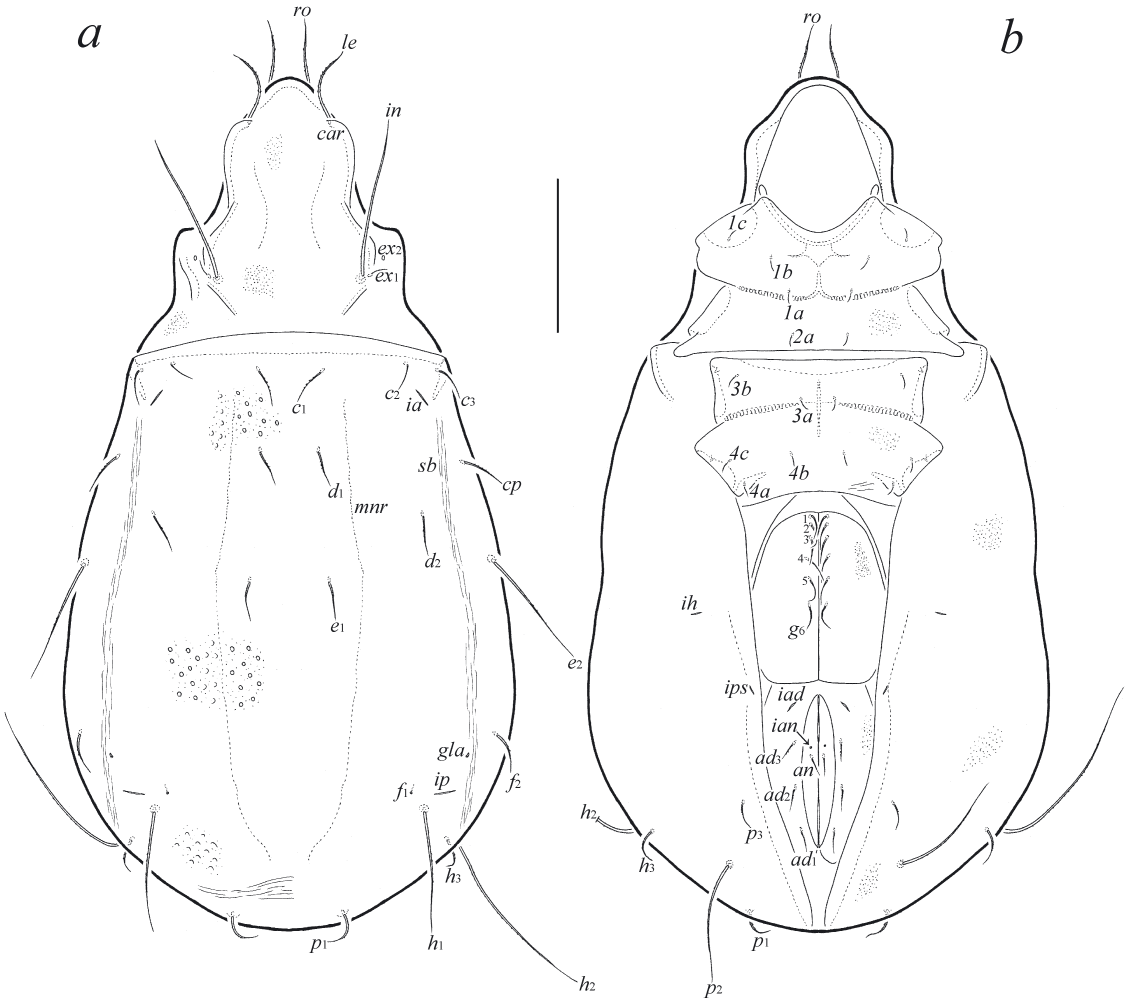

Fig. 1. *Tyrphonothrus pinarensis* Ermilov sp. n., adult (gnathosoma and legs not shown): *a* – dorsal view, *b* – ventral view. Scale bar 100 μm.

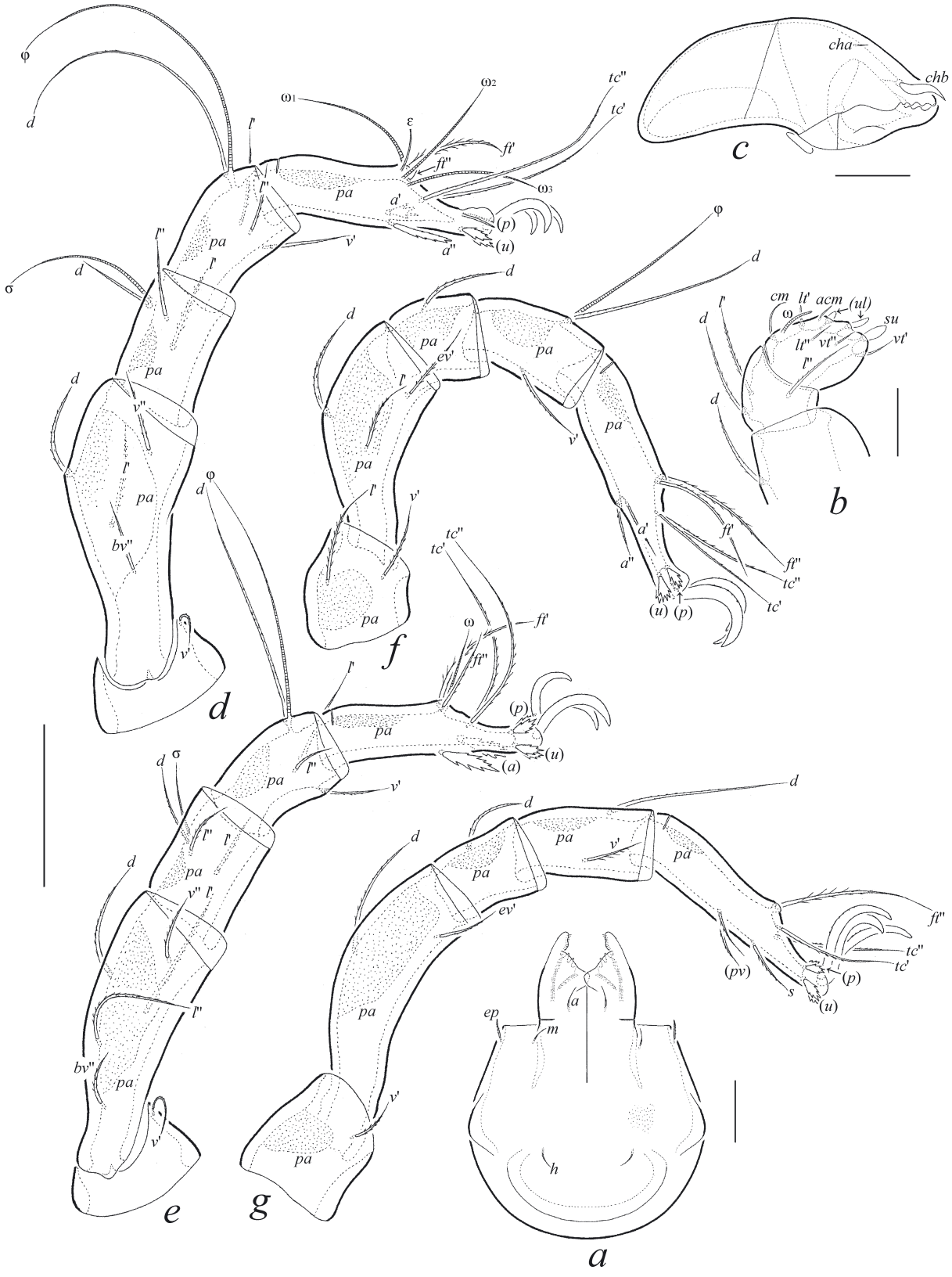

Fig. 2. *Tyrphonothrus pinarensis* Ermilov sp. n., adult: *a* – subcapitulum, ventral view; *b* – distal part of palp, right, antiaxial view; *c* – chelicera, right, antiaxial view; *d* – leg I, right, antiaxial view; *e* – leg II, right, antiaxial view; *f* – leg III, left, antiaxial view; *g* – leg IV, left, antiaxial view. Scale bar, μm: *a*–*c* – 20; *d*–*g* – 50.

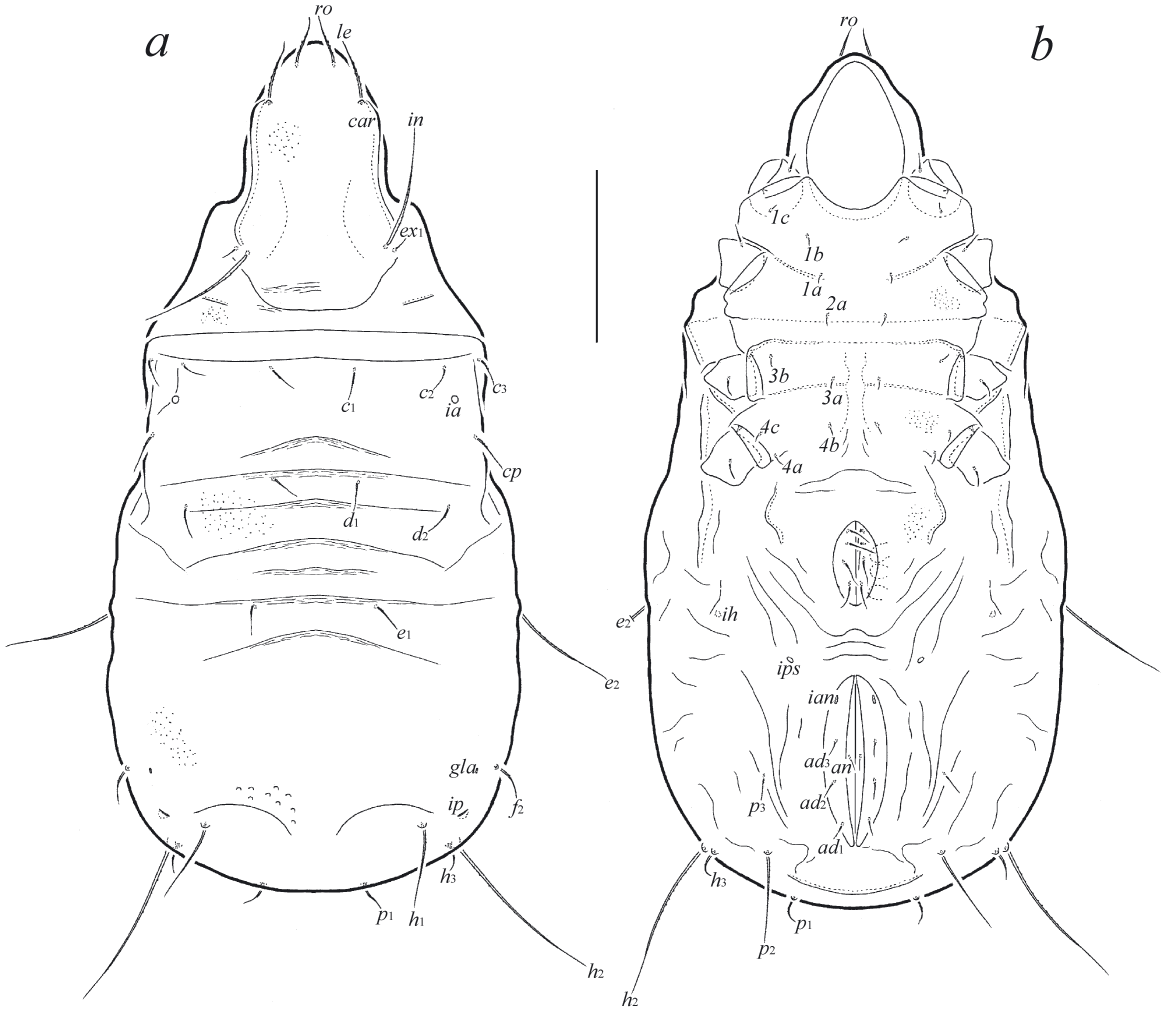

Fig. 3. *Tyrphonothrus pinarensis* Ermilov sp. n., tritonymph (gnathosoma and legs not shown): *a* – dorsal view, *b* – ventral view. Scale bar 100 μm.

setae *p* on tarsi II–IV, *u* on tarsi I–IV, *a′* on tarsus I, and *a* on tarsus II short, phylliform, with distal spines; seta *ft″* on tarsus I tubercle-like.

Description of adult. *Measurements*. Body length: 585 (holotype), 555–585 (paratypes); notogastral width: 315 (holotype), 300–315 (paratypes).

Integument. Body color light brown. Body surface densely porose and covered by thin gel-like cerotegument; lateral part of notogaster (medial to setae *cp*, e_2, f_2) with longitudinal striate cerotegumental band; notogaster sparsely foveolate (diameter of foveola up to 7).

Prodorsum. Rostrum broadly rounded. Lateral carina well-developed (distinctly visible in dorsal view), directed to insertion of lamellar seta. Rostral (52–60), lamellar (60–67), interlamellar (94–106) setae, and exobothridial seta ex_1 (15–19) setiform, barbed; exobothridial seta ex_2 vestigial.

Notogaster. Anterior margin slightly convex medially. Medioposterior part of notogaster slightly widening. Two longitudinal medial ridges present but often poorly observed in dorsal aspect (versus distinctly visible in dorsolateral aspect). Notogastral setae e_2, h_1, p_2 (86–94), and h_2 (135–150) subflagellate, barbed; c_2, p_3 (19–22) and others (30–34) setiform, barbed; p_3 located anteriorly to p_2, both distant from each other; alveolus of f_1 visible. Opisthonotal gland opening and all notogastral lyrifissures distinct in transmitted light.

Gnathosoma. Subcapitulum size: 97–101 × 75–82; subcapitular setae (*a*: 11; *m*, *h*: 7) setiform, roughened; three pairs of adoral setae (5) setiform, smooth. Palp length: 45–49; formula: 0–0–1–3–9(+ω); postpalpal

Table 1. Leg setation and solenidia of adult and tritonymph *Tyrphonothrus pinarensis* Ermilov sp. n.

Leg	*Tr*	*Fe*	*Ge*	*Ti*	*Ta*
I	*v′*	*d*, *l′*, *bv″*, *v″*	(*l*), *d*σ	(*l*), *v′*, *d*φ	(*ft*), (*tc*), (*p*), (*u*), (*a*), ε, ω_1, ω_2, ω_3
II	*v′*	*d*, (*l*), *bv″*, *v″*	(*l*), *d*σ	(*l*), *v′*, *d*φ	(*ft*), (*tc*), (*p*), (*u*), (*a*), ω_1
III	*l′*, *v′*	*d*, *l′*, *ev′*	*d*	*v′*, *d*φ	(*ft*), (*tc*), (*p*), (*u*), (*a*)
IV	*v′*	*d*, *ev′*	*d*	*d*, *v′*	*ft″*, (*tc*), (*p*), (*u*), *s*, (*pv*)

Notes. Roman letters refer to normal setae, Greek letters refer to solenidia (except ε – famulus); single quotation mark (′) designates setae on the anterior and double quotation (″) setae on the posterior side of a given leg segment; parentheses indicate addition of both members of a pseudosymmetrical pair; juxtaposition of seta *d* with solenidion indicates coupling.

seta (7) spiniform, barbed. Chelicera (length: 90–101) with two setae: *cha* (4) spiniform, smooth; *chb* (15) falciform, smooth.

Epimeral region. Epimeral setal formula: 3–1–2–3; all setae (9–13) setiform, roughened.

Anogenital region. Six pairs of genital setae (22–26) setiform, smooth or roughened, directed backwards; anal (13–15) and adanal setae (19–22) setiform, roughened. Anal and adanal lyrifissures distinct.

Legs. Tridactylous; claws similar in size, dorsally slightly barbed. All segments with distinct dorsoantiaxial porose area. Formulas of leg setation and solenidia: I (1–4–3–4–11) [1–1–3], II (1–5–3–4–10) [1–1–1], III (2–3–1–2–10) [0–1–0], IV (1–2–1–2–10) [0–0–0]; homology of setae and solenidia indicated in Table 1. Setae *p* on tarsi II–IV, *u* on tarsi I–IV, *a′* on tarsus I, and *a* on tarsus II have specific form (short, phylliform, with distal spines); seta *ft″* on tarsus I tubercle-like.

Description of tritonymph. *Measurements*. Total length of tritonymph: 525–530. Total width of tritonymph: 240–255.

Integument. Body colorless to light yellowish. Body surface densely porose (especially well visible in epimeral region) and covered by gel-like and sparsely microtuberculate cerotegument; additionally, gastronotum with transverse folds, anogenital region irregularly folded; posterior part of notogaster partially foveolate (diameter of foveola up to 7).

Prodorsum. Relatively short, about 1/2 length of gastronotic region. Rostrum broadly rounded. Lateral carina well-developed (distinctly visible in dorsal view). Rostral (41–49), lamellar (49–60), interlamellar (71–75) setae, and exobothridial seta ex_1 (15–17) setiform, barbed.

Gastronotic region. Posteriorly rounded. Notogastral setae e_2, h_1, p_2 (71–75), and h_2 (110–123) subflagellate, barbed; c_2, p_3 (15) and others (19–22) setiform, barbed; alveolus of f_1 not visible. Opisthonotal gland opening and all cupules distinct in transmitted light.

Gnathosoma. Generally, similar to adult, except smaller sizes.

Epimeral region. Epimeral setal formula: 3–1–2–3; all setae (7–11) setiform, roughened.

Anogenital region. Four pairs of genital setae (17–22) setiform, smooth or roughened, directed backwards; anal and adanal (11–15) setae setiform, roughened. Anal and adanal cupules distinct.

Legs. Generally, similar to adult but all tarsi with one claw.

Comparison. The adult *Tyrphonothrus pinarensis* Ermilov sp. n. is similar to *Tyrphonothrus crassipes* (Ramadan, Ismail et Mustafa 2017) (=*Malaconothrus ramadani* Ramadan, Ismail et Mustafa 2018; =*Malaconothrus transversus* Ramadan, Ismail, Mustafa, 2018) from Egypt (see Ramadan et al., 2017, 2018; Ermilov, 2021) in having foveolate notogaster, two longitudinal medial notogastral ridges, slightly widening medioposterior part of the notogaster, six pairs of genital setae, and tridactylous legs. The two species are also similar in the presence of phylliform setae *p* and *u* with distal spines on tarsi II–IV and I–IV, respectively. However, the new species differs from *T. crassipes* in the presence of barbed (versus smooth) notogastral setae e_2, h_1, p_2, h_2, distinctly shorter interlamellar setae, one (versus two) pair of setae on the epimere II, and setiform (versus phylliform, with distal spines) setae (*a*) and *(pv)* on leg tarsi III and IV, respectively.

Etymology. The specific epithet *pinarensis* refers to Pinar del Río, the province of origin of the new species.

Scheloribates* (*Topobates*) *rioensis Ermilov sp. n.
(Figs 4, 5)

Type material. Holotype (♀) and one paratype (♂): Cuba, Pinar del Río Province, Las Terrazas, Baños de San Juan, aquatic plants (unknown data and collector; collection of the Tyumen State University Museum of Zoology, Tyumen, Russia).

The holotype is deposited in the collection of the Senckenberg Museum of Natural History, Görlitz, Germany; one paratype is deposited in the collection of the Tyumen State University Museum of Zoology, Tyumen, Russia. All specimens are preserved in 70% solution of ethanol with a drop of glycerol.

Diagnosis of adult. Adult. Body length: 345–360. Pteromorph striate. Rostrum rounded.

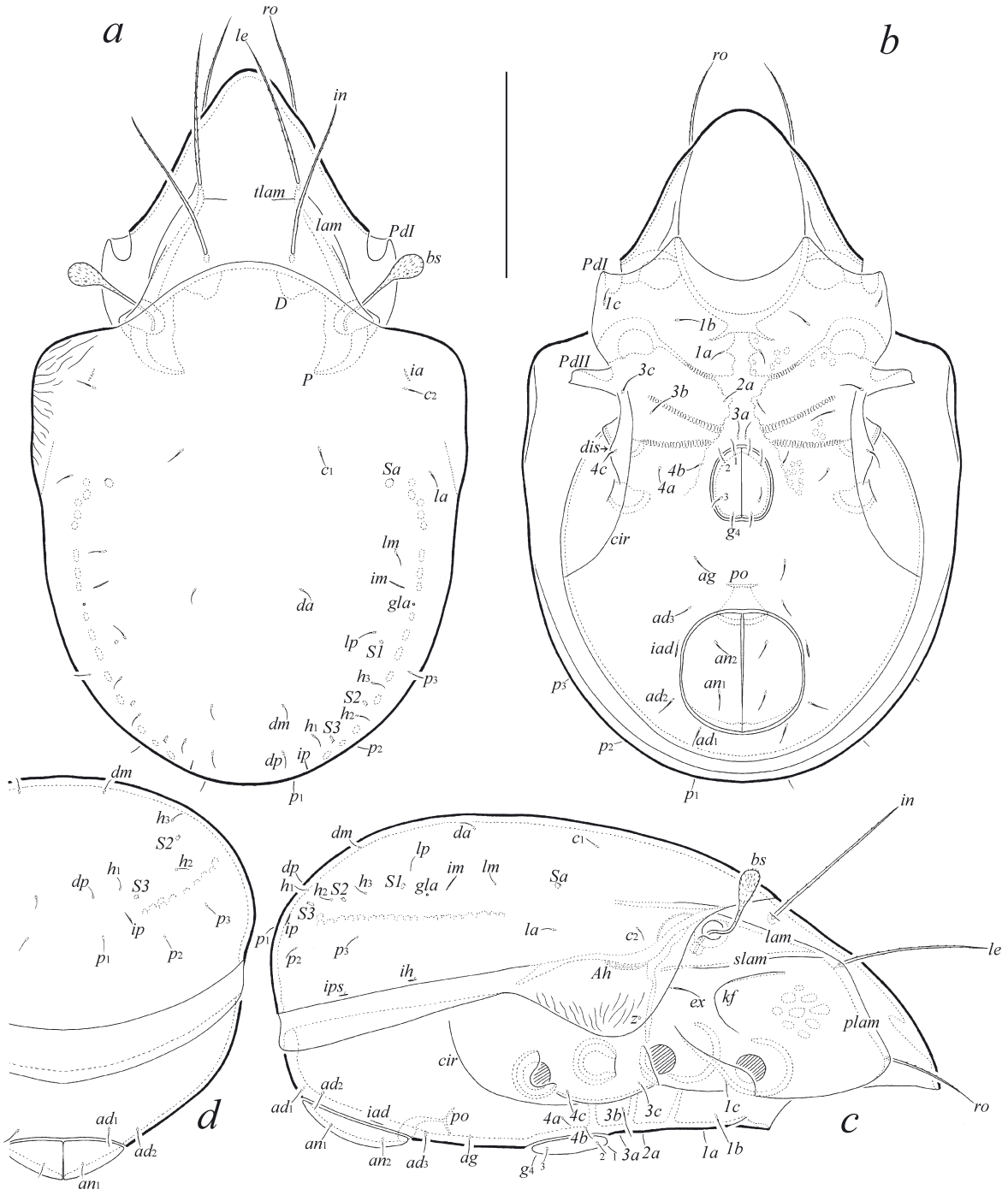

Fig. 4. *Scheloribates* (*Topobates*) *rioensis* Ermilov sp. n., adult (gnathosoma and legs not shown): *a* – dorsal view, *b* – ventral view, *c* – right lateral view, *d* – posterior view. Scale bar 100 μm.

Prolamella complete; translamella present, interrupted medially. Rostral, lamellar and interlamellar setae long, setiform, barbed; *in* >>*le* >>*ro*; bothridial seta long, clavate, with large, rounded distally, barbed head. Fourteen pairs of notogastral setae (one seta of *c*-row absent), all short, setiform, roughened; *dm* and *dp* strongly shifted in posterior part of notogaster. Four pairs of sacculi. Epimeral and anogenital setae short, setiform, roughened. Pedotectum II with small posterolateral tooth. Circumpedal carina long. Heterotridactylous; tibiae I, II with ventrobasal tooth; tarsus I with 19 setae (*l*″ absent); genu I with two setae (*v*′ absent).

Fig. 5. *Scheloribates* (*Topobates*) *rioensis* Ermilov sp. n., adult: *a* – subcapitulum, ventral view; *b* – palp, right, antiaxial view; *c* – chelicera, left, paraxial view; *d* – leg I, right, antiaxial view; *e* – leg II (without tarsus), right, antiaxial view; *f* – leg III (without tarsus), left, antiaxial view; *g* – leg IV, left, antiaxial view. Scale bar, μm: *a*, *c* – 20; *b* – 10; *d*–*g* – 50.

Table 2. Leg setation and solenidia of adult and tritonymph *Scheloribates* (*Topobates*) *rioensis* Ermilov sp. n.

Leg	*Tr*	*Fe*	*Ge*	*Ti*	*Ta*
I	*v′*	*d*, (*l*), *bv″*, *v″*	(*l*), σ	(*l*), (*v*), φ$_1$, φ$_2$	(*ft*), (*tc*), (*it*), (*p*), (*u*), (*a*), *s*, (*pv*), *v′*, (*pl*), ε, ω$_1$, ω$_2$
II	*v′*	*d*, (*l*), *bv″*, *v″*	(*l*), σ	(*l*), (*v*), φ	(*ft*), (*tc*), (*it*), (*p*), (*u*), (*a*), *s*, (*pv*), ω$_1$, ω$_2$
III	*l′*, *v′*	*d*, *l′*, *ev′*	*l′*, σ	*l′*, (*v*), φ	(*ft*), (*tc*), (*it*), (*p*), (*u*), (*a*), *s*, (*pv*)
IV	*v′*	*d*, *ev′*	*d*, *l′*	*l′*, (*v*), φ	*ft″*, (*tc*), (*p*), (*u*), (*a*), *s*, (*pv*)

Notes. See Table 1 for explanations.

D e s c r i p t i o n o f a d u l t. *Measurements*. Body length: 360 (holotype), 345 (paratype); notogaster width (level pteromorphs): 240 (holotype), 225 (paratype); ventral plate width: 210 (holotype), 180 (paratype).

Integument. Body color brown. Body surface densely microfoveolate (visible only under high magnification); additionally, pteromorph clearly striate.

Prodorsum. Rostrum rounded. Lamella about 1/2 length of prodorsum; prolamella complete (reaching insertion of *ro*); translamella present, and interrupted medially, represented by two lines nearly lamellae; sublamella and lateral keel-shaped ridge distinct; sublamellar porose area not observed. Rostral (52–60), lamellar (75–82) and interlamellar (90–94) setae setiform, barbed; exobothridial seta (17–19) setiform, slightly barbed; bothridial seta (49–56) with roughened stalk and large, clavate (rounded distally), barbed head. Dorsosejugal porose area not observed.

Notogaster. Pteromorph triangular, rounded; pteromorphal hinge absent. Fourteen pairs of notogastral setae present (one seta of *c*-row absent), all (7) setiform, roughened; *dm* and *dp* strongly shifted in posterior part of notogaster. Four pairs of sacculi with small opening and drop-like channel. Opisthonotal gland opening and all lyrifissures distinct.

Gnathosoma. Subcapitulum size: 94–97 × 67–69; subcapitular setae (*a*: 17–19; *m*: 13–15; *h*: 19–22) setiform, roughened; *m* thinner than *a* and *h*; two pairs of adoral setae (11–13) setiform, barbed. Palp length: 60–64; formula: 0–2–1–3–9(+ω); postpalpal seta (7) spiniform, roughened. Chelicera length: 105–112; setae (*cha*: 35–37; *chb*: 22–26) setiform, barbed.

Epimeral and lateral podosomal regions. Epimeral formula: 3–1–3–3; all setae (*1b*, *3b*: 17–19; *3c*, *4c*: 13–15; others: 9–11) setiform, roughened. Humeral porose area *Ah* elongate oval, *Am* not observable. Pedotectum II with small posterolateral tooth. Discidium broadly triangular. Circumpedal carina long, directed to pedotectum II.

Anogenital region. Genital (7–9), aggenital (9–11), anal (9–11), and adanal (9–11) setae setiform, roughened. Adanal lyrifissure distinct. Marginal porose area not observed.

Legs. Heterotridactylous; median claw thick, lateral claws thin, with small tooth distoventrally, all claws dorsally slightly barbed. Ventrobasal tooth of tibiae I, II well observable. Proximoventral porose area on tarsi I–IV, distoventral porose area on tibiae I–IV, dorsoparaxial porose area on femora I–IV and on trochanters III, IV distinct. Formulas of leg setation and solenidia: I (1–5–2–4–19) [1–2–2], II (1–5–2–4–15) [1–1–2], III (2–3–1–3–15) [1–1–0], IV (1–2–2–3–12) [0–1–0]; homology of setae and solenidia indicated in Table 2. Seta *s* on tarsus I setiform (not eupathidial), barbed, located between (*a*) and (*pv*).

C o m p a r i s o n. The adult of *Scheloribates* (*Topobates*) *rioensis* Ermilov sp. n. is similar to that of *S.* (*T.*) *alvaradoi* Pérez-Íñigo 1969 from Europe (see Pérez-Íñigo, 1969; Weigmann, Miko, 1998) in having heterotridactylous legs, short notogastral setae and clavate bothridial seta. However, the new species differ from *S.* (*T.*) *alvaradoi* in the presence of striate (versus not striate) pteromorphs, four (versus five) pairs of notogastral sacculi, and the position of the notogastral setae *dm* and *dp* (strongly shifted in the posterior part of the notogaster versus not shifted).

E t y m o l o g y. The specific epithet *rioensis* refers to Pinar del Río, the province of origin of the new species.

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This work does not contain any studies involving human and animal subjects that meet the criteria of the Directive 2010/63/EU.

CONFLICT OF INTEREST

The authors of this work declare that they have no conflicts of interest.

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НОВЫЕ ФАУНИСТИЧЕСКИЕ И ТАКСОНОМИЧЕСКИЕ ДАННЫЕ ПО ПАНЦИРНЫМ КЛЕЩАМ (ACARI, ORIBATIDA) КУБЫ

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Исследование базируется на орибатологическом материале, собранном в провинции Пинар дель Рио, Куба. Представлен перечень 22 видов, относящихся к 17 родам и 13 семействам. Девять видов отмечены для Кубы впервые. С водных растений описаны два новых вида, *Tyrphonothrus pinarensis* Ermilov sp. n. (Malaconothridae) и *Scheloribates* (*Topobates*) *rioensis* Ermilov sp. n. (Scheloribatidae). Изучена тритонимфальная стадия *T. pinarensis*.

Ключевые слова: *Tyrphonothrus*, *Scheloribates* (*Topobates*), морфология, таксономия, неотропическая фауна, новая находка, тритонимфа